

TITLE: A NETWORK SECURITY PLANNING
ARCHITECTURE

Inventors: Richard Lippmann, et al.

Filed: December 11, 2003 MIS-00301

Agent: Anne E. Saturnelli Reg. No.: 41,290

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10

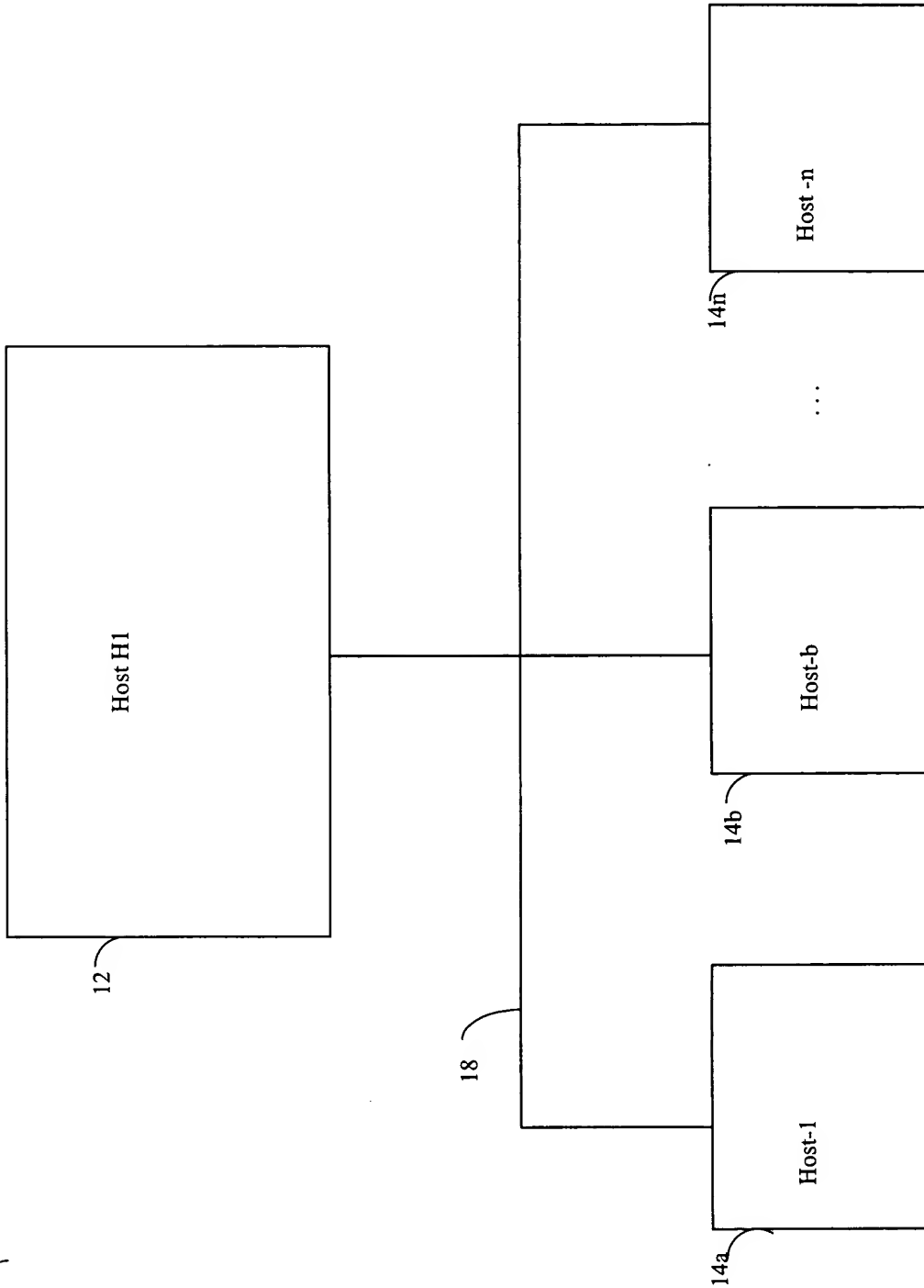


FIGURE 1

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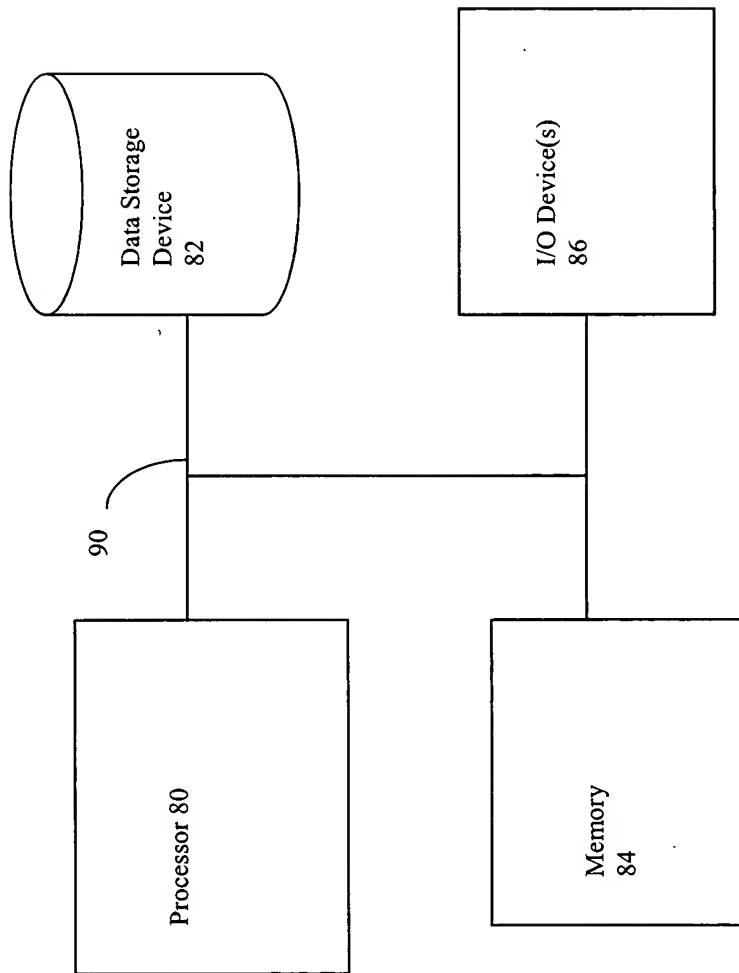


FIGURE 2

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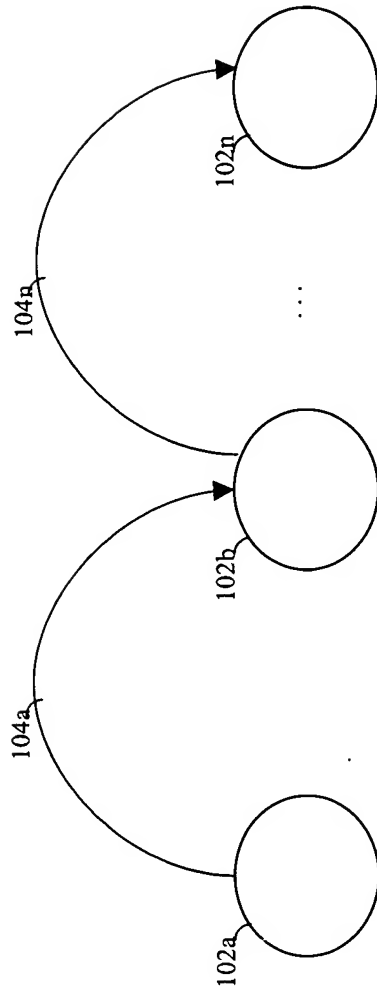


FIGURE 3

110

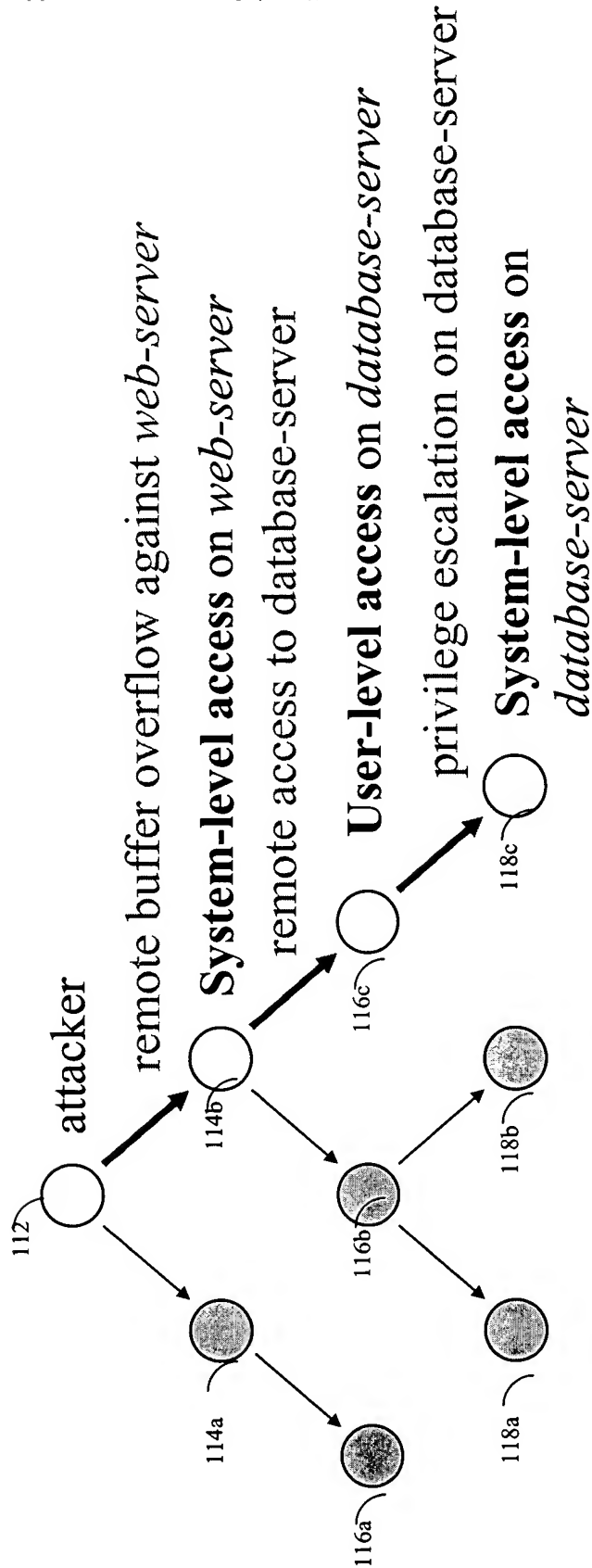


FIGURE 4

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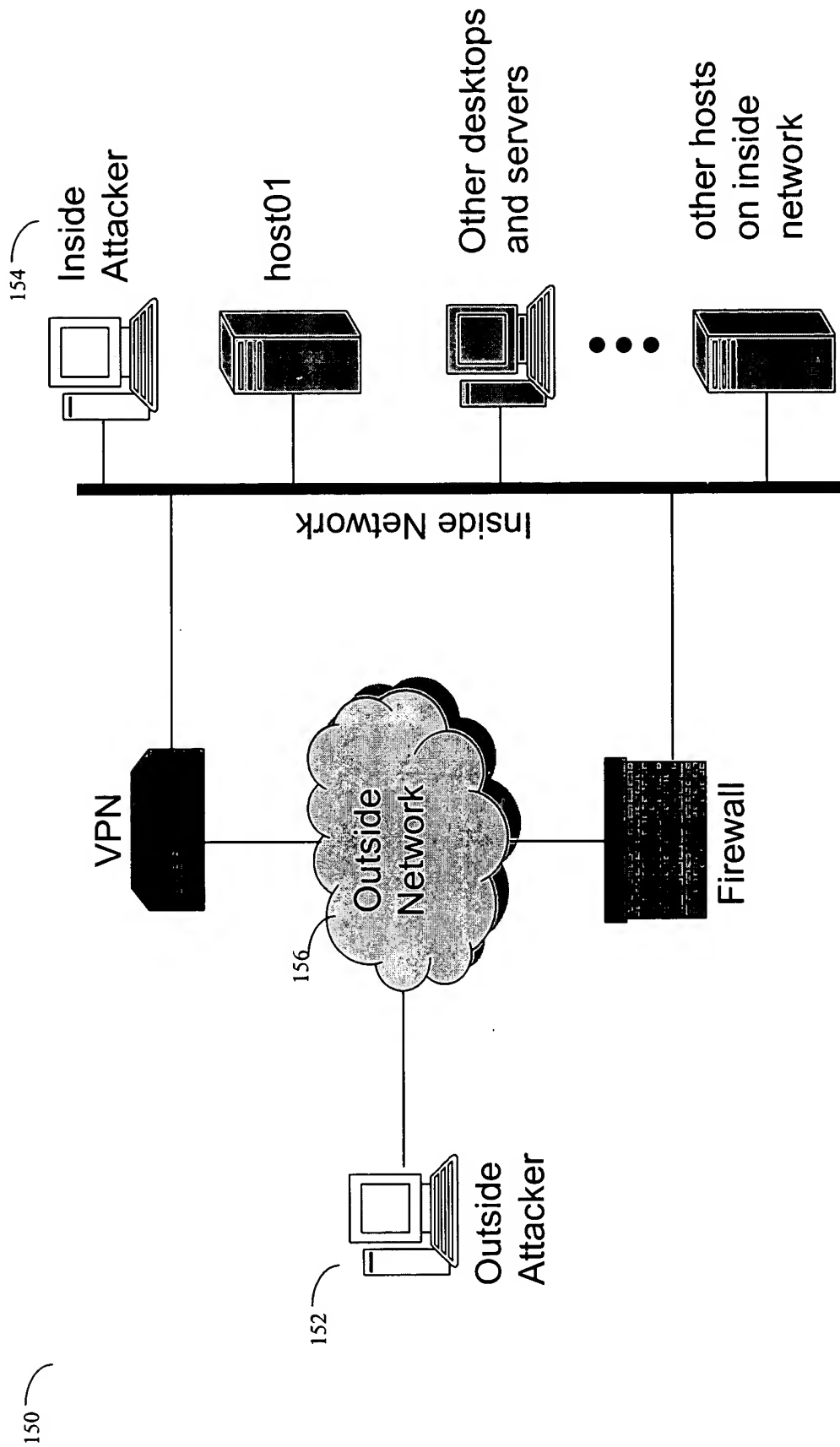


FIGURE 5

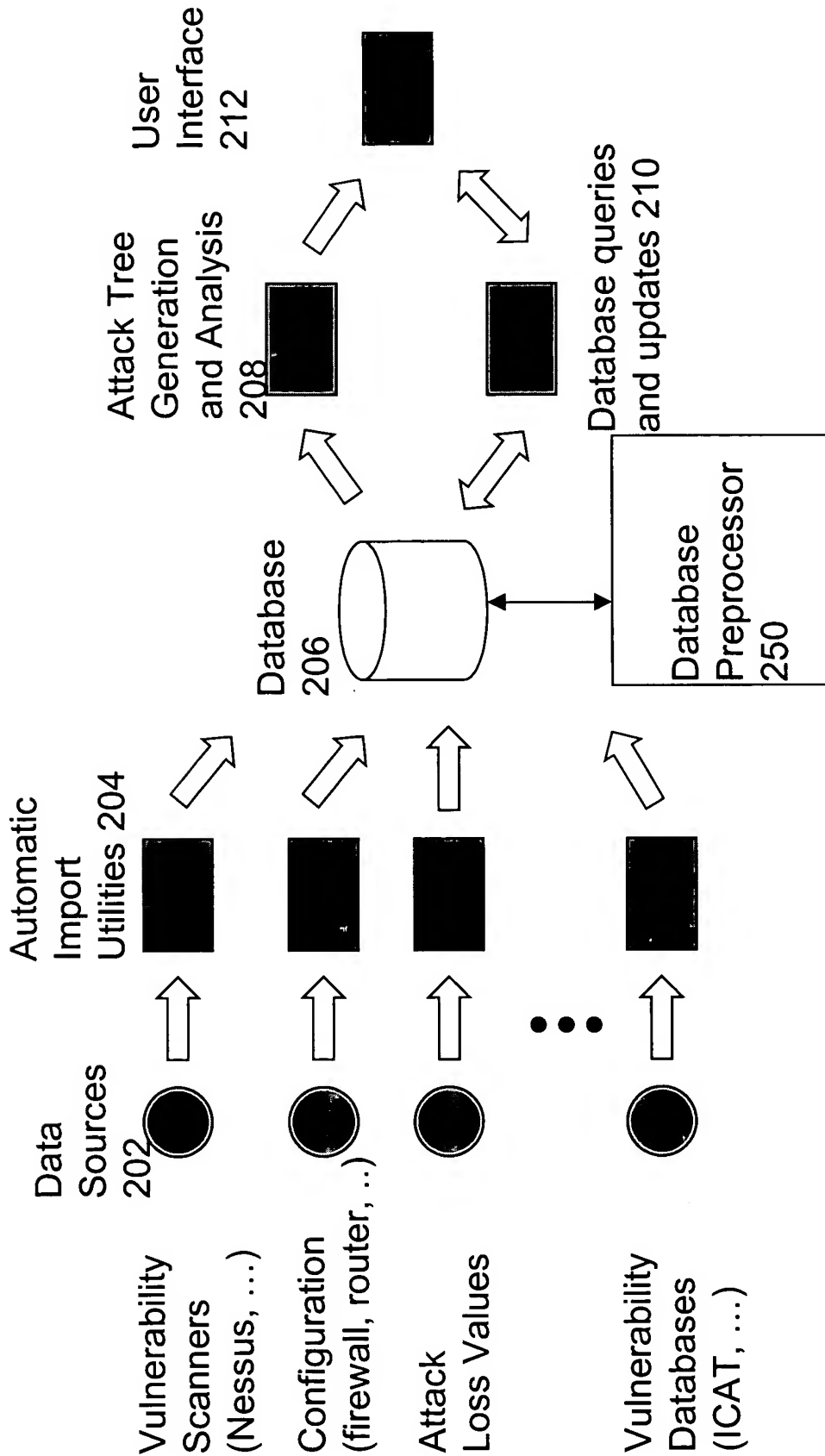


FIGURE 6

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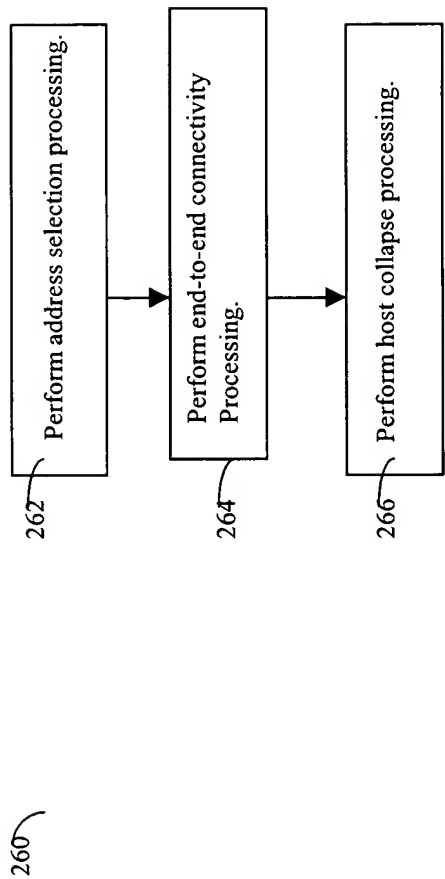


FIGURE 7A

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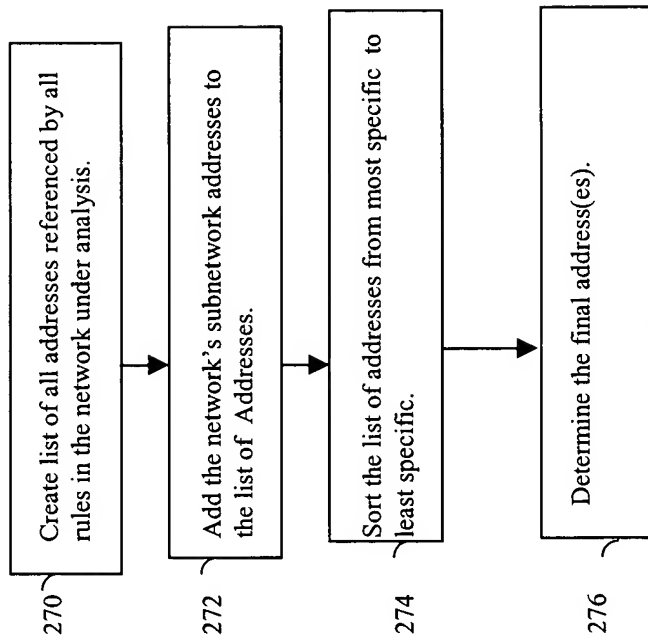


FIGURE 7B

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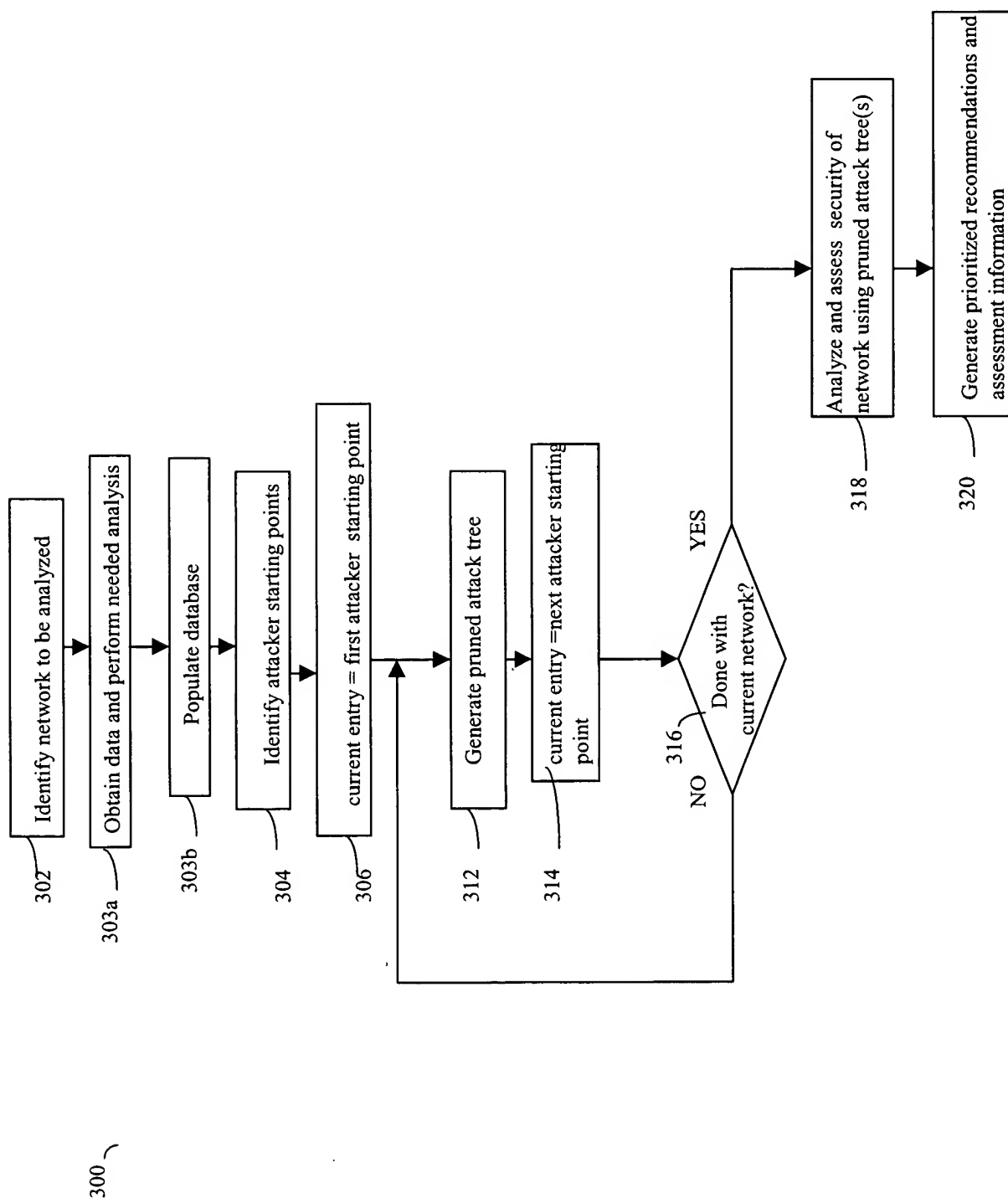


FIGURE 8

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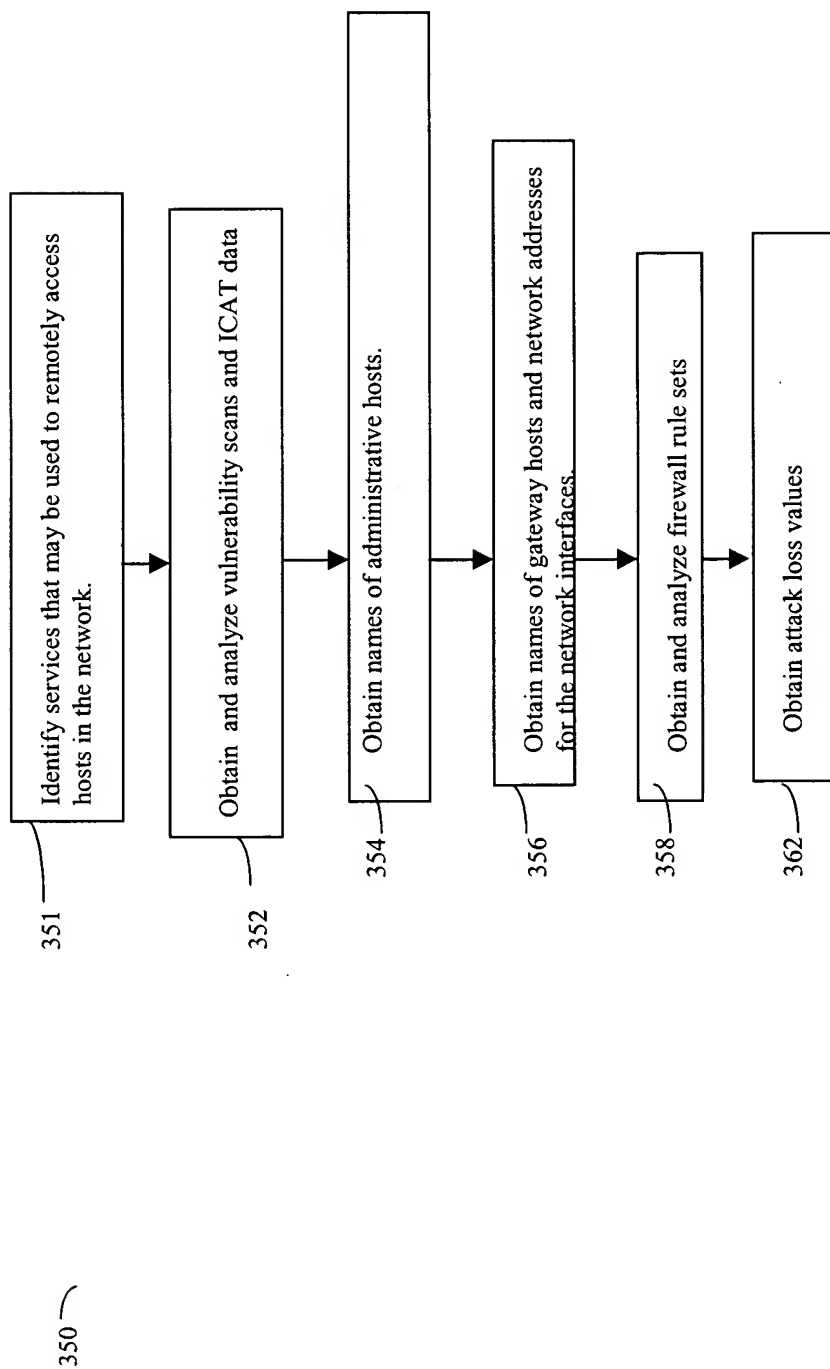


FIGURE 9A

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370

	372 A	374 B	376 C
1	host97	file server	5000
2	host43	backup server	5000
3	host01	DNS server	2000
4	host56	domain controller	1000
5	switch01	switch	400

FIGURE 9B

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40



FIGURE 10

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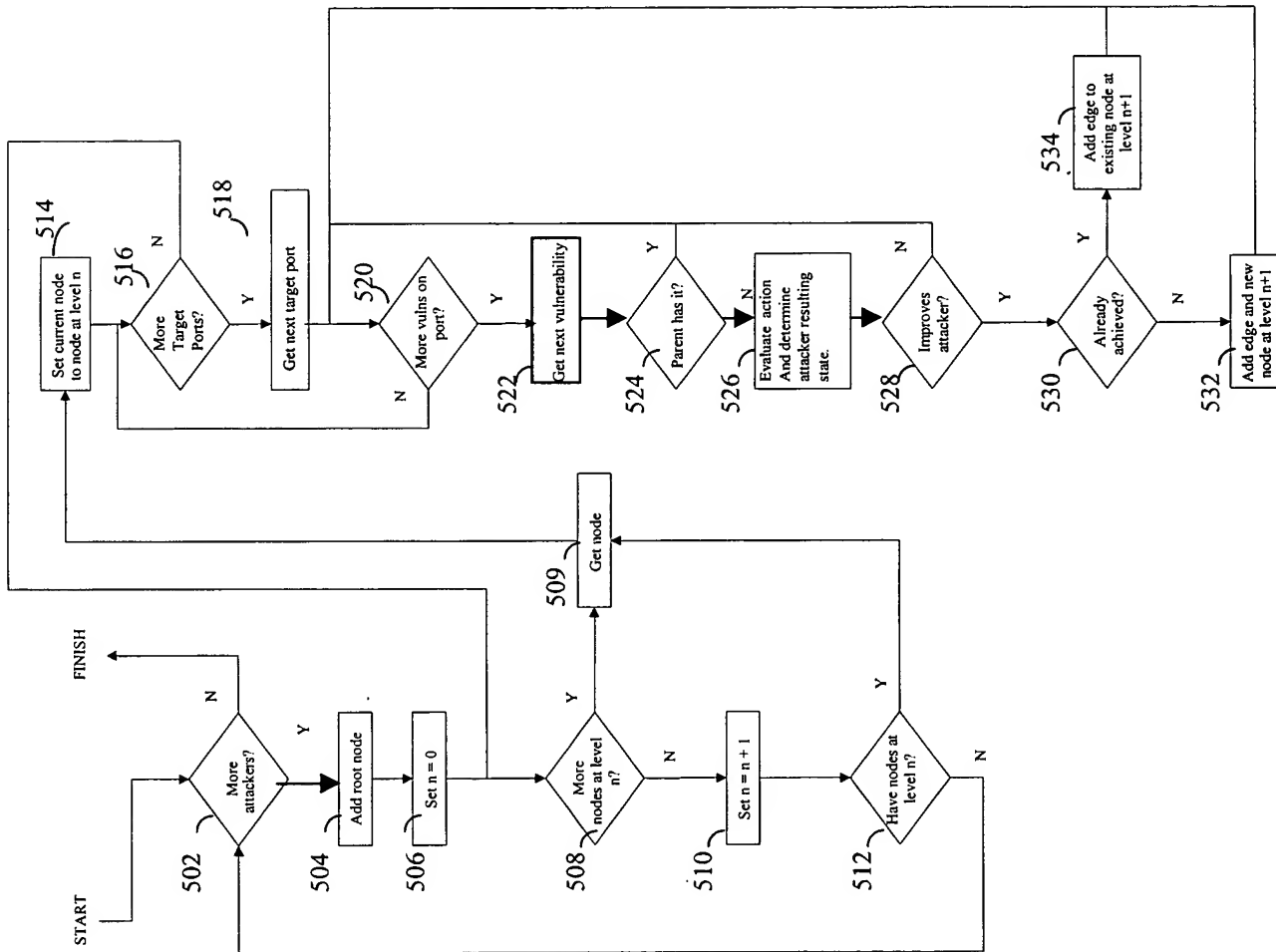


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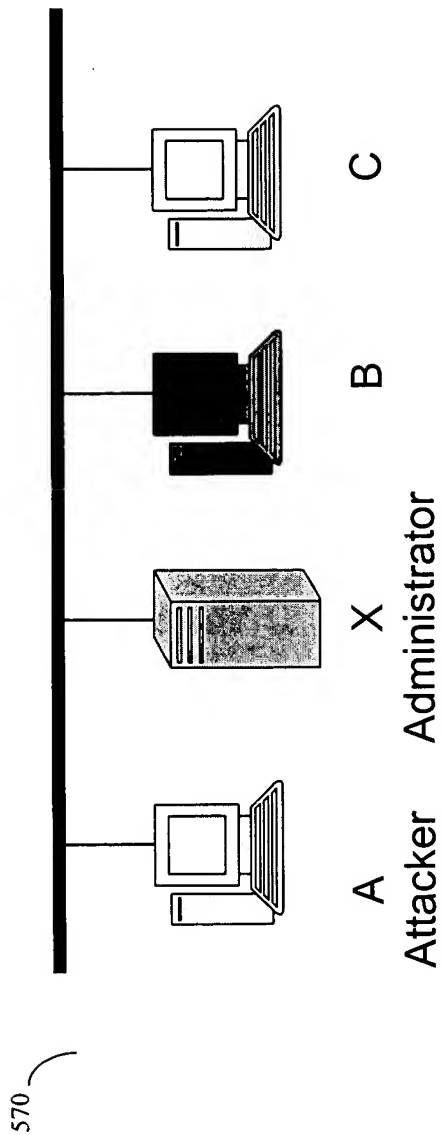


FIGURE 12A

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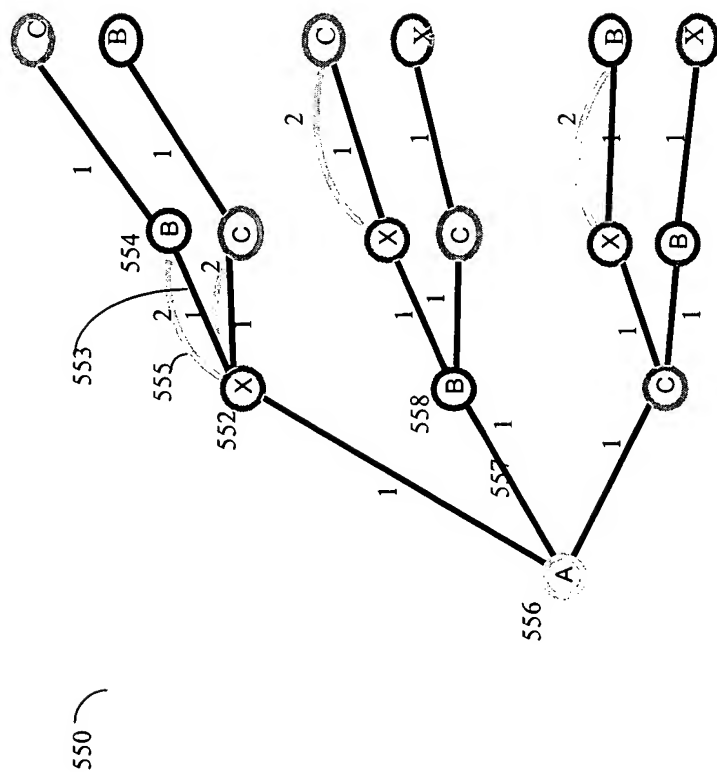


FIGURE 12B

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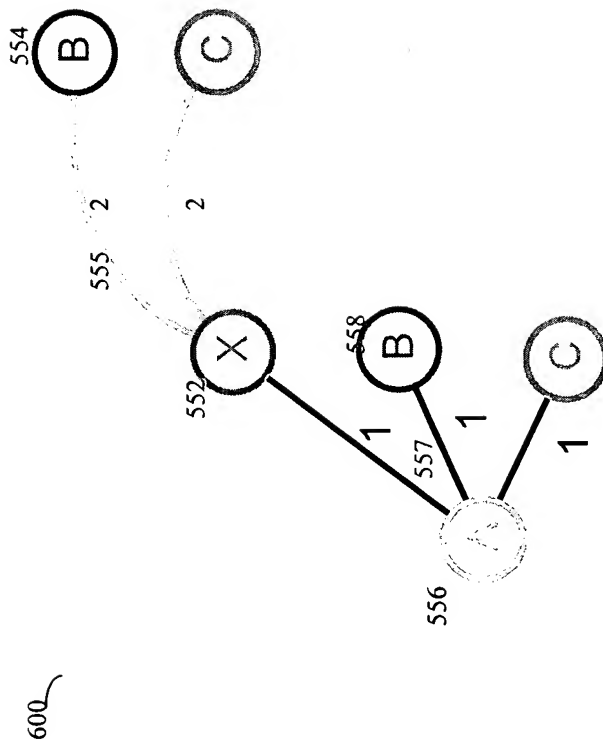


FIGURE 13

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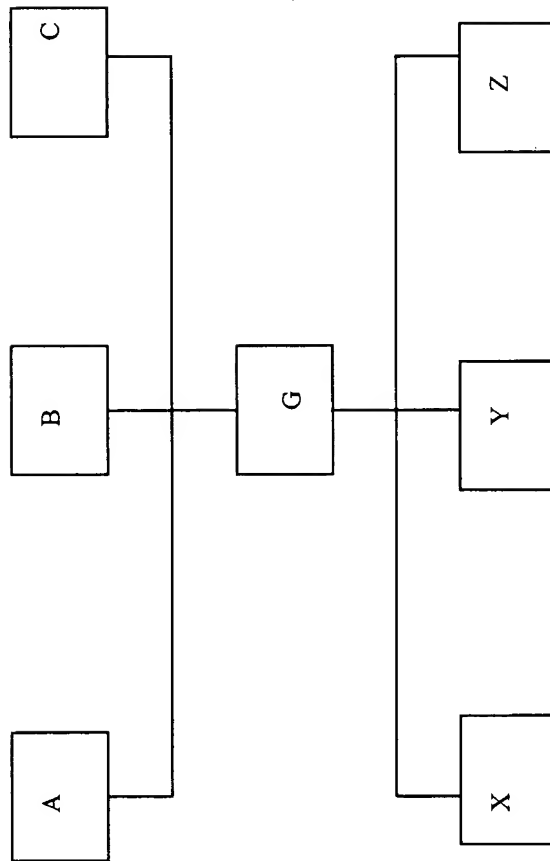


FIGURE 14

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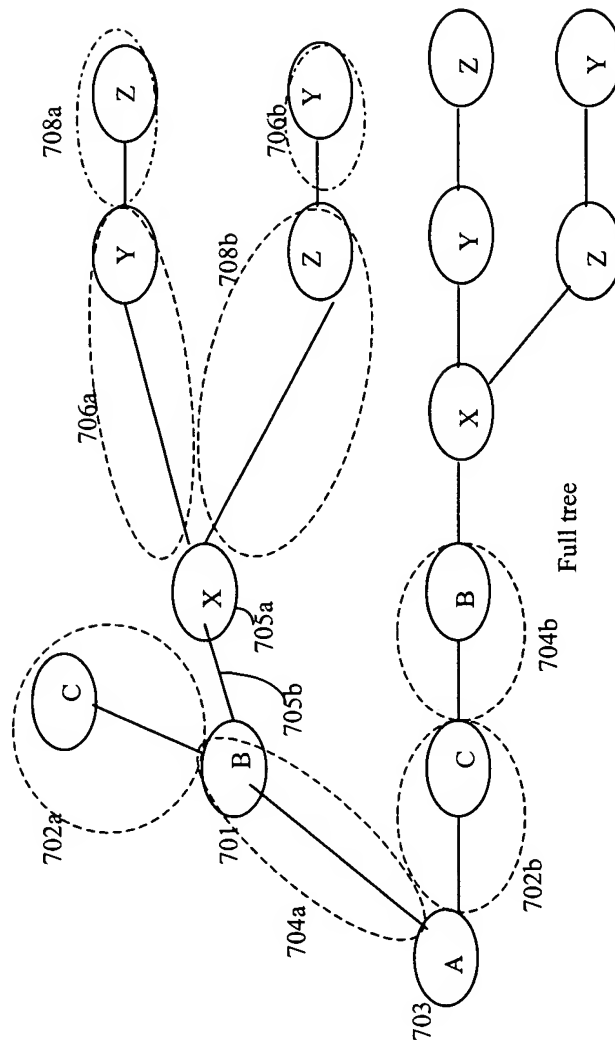


FIGURE 15

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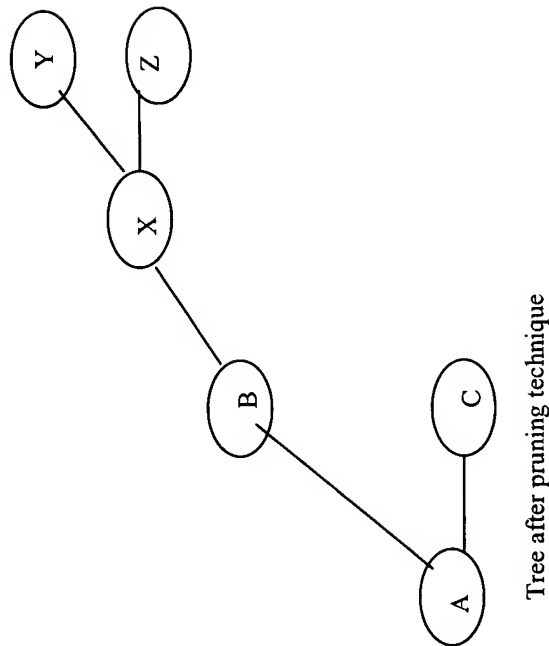
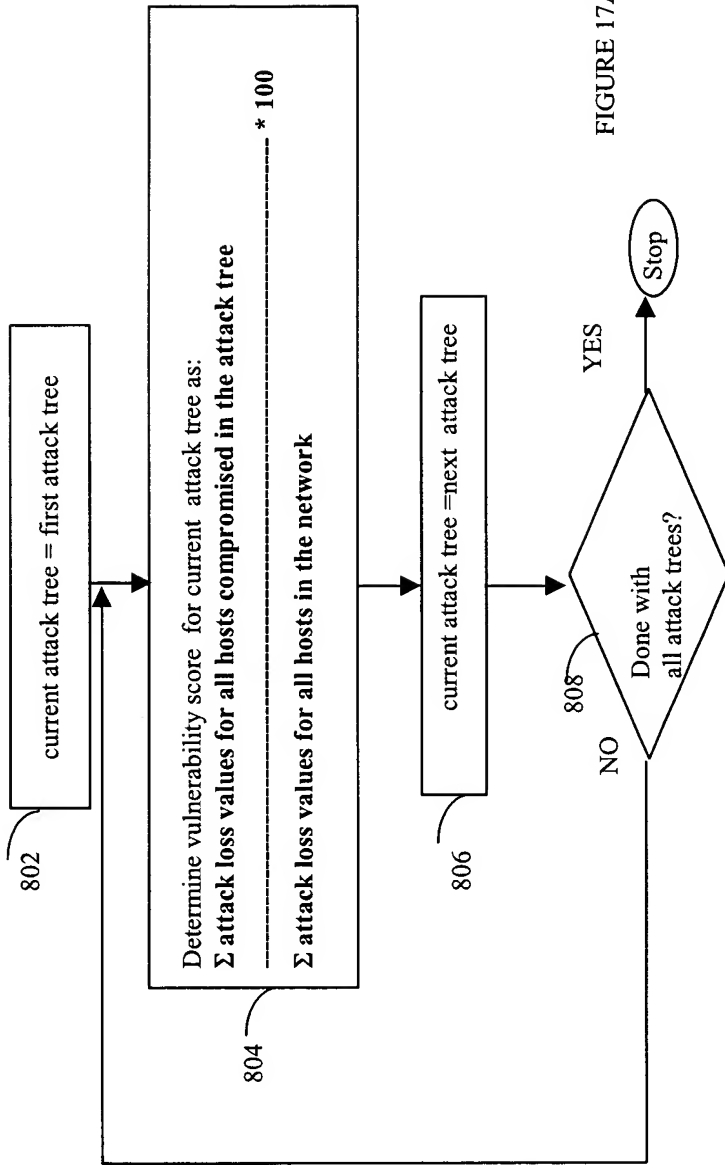
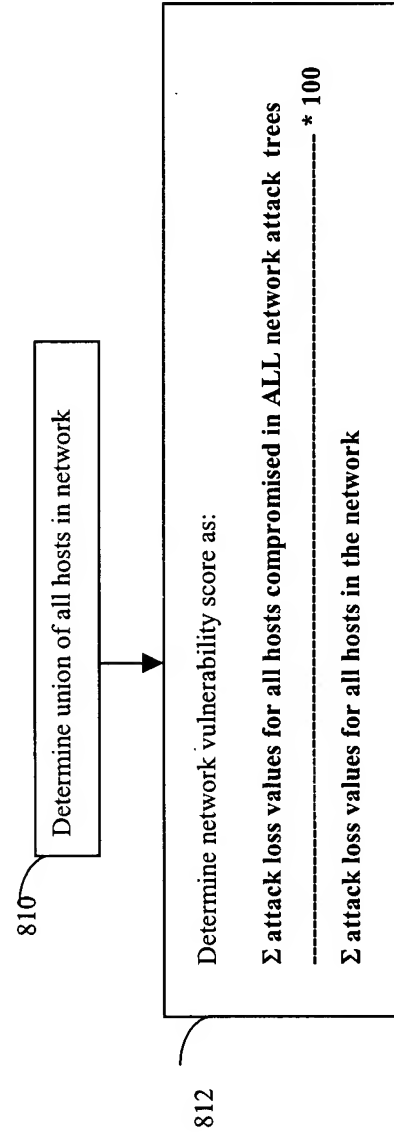


FIGURE 16

800



809



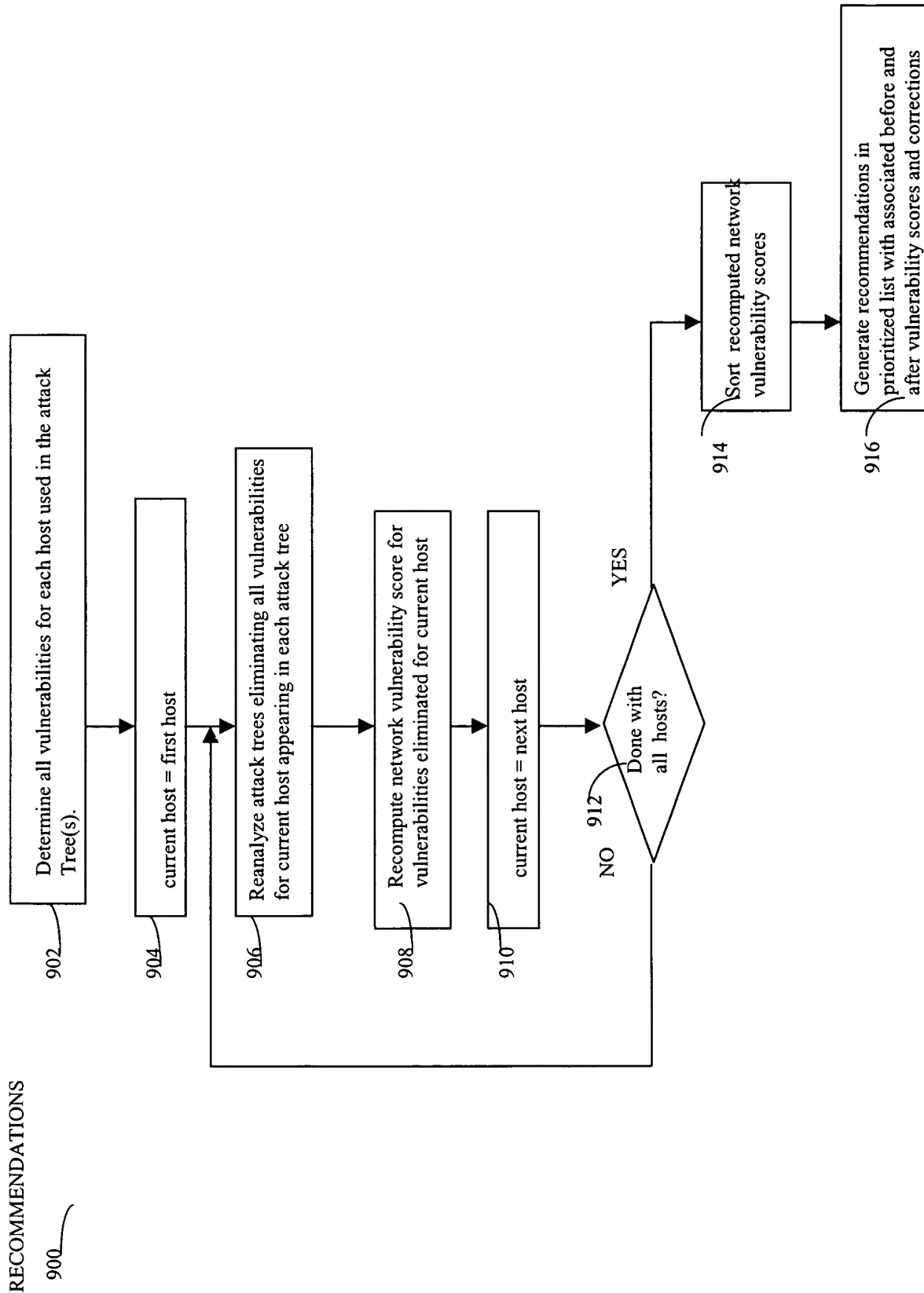


FIGURE 18

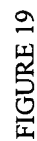


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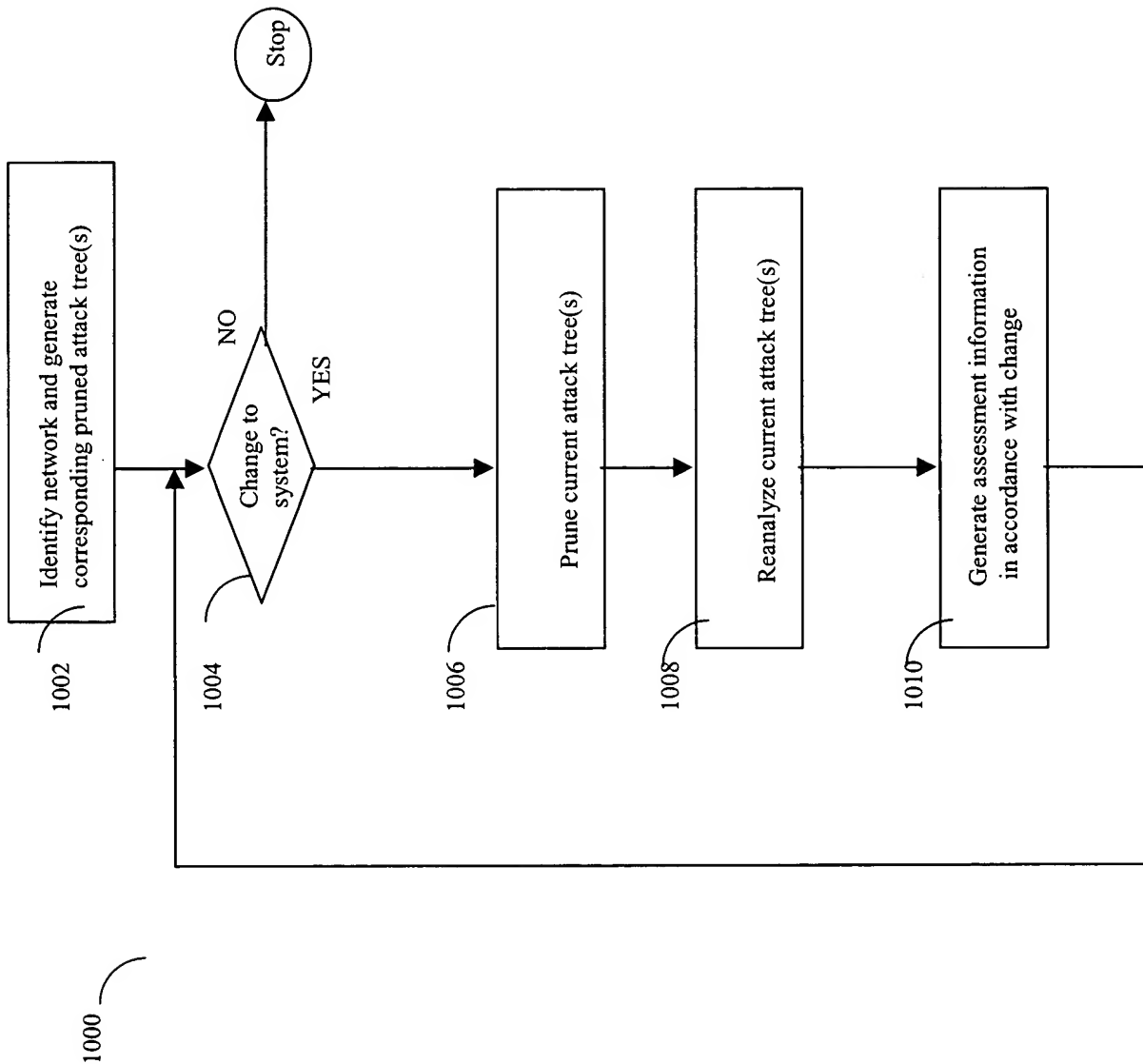


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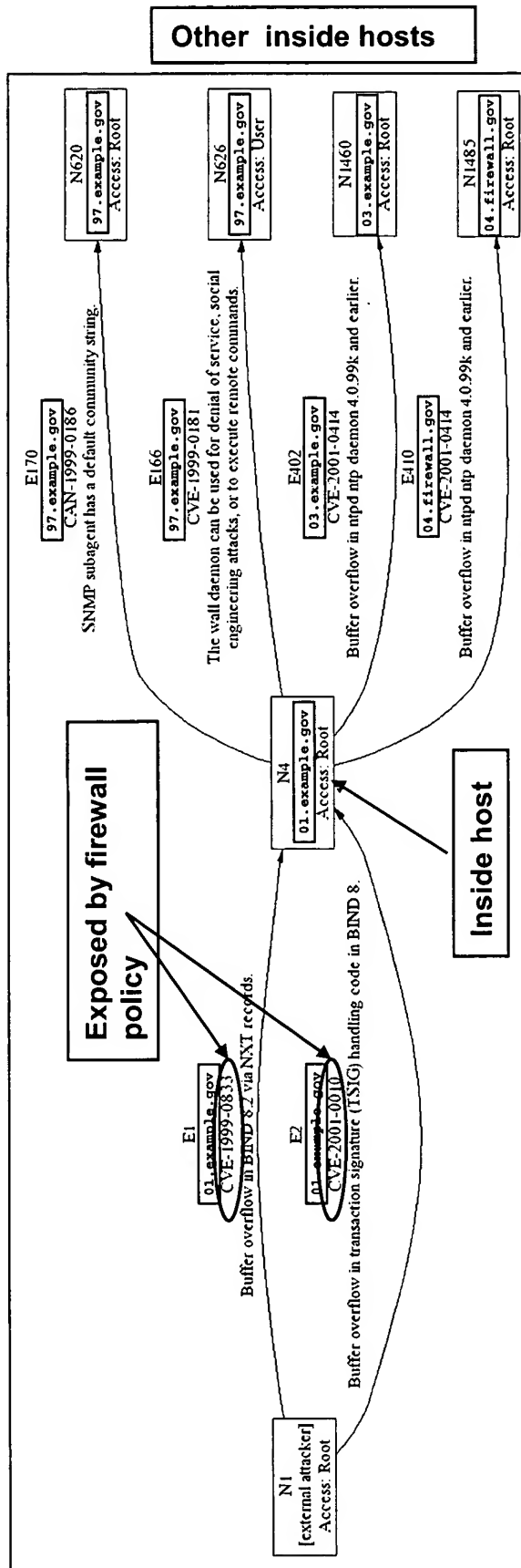


FIGURE 21A

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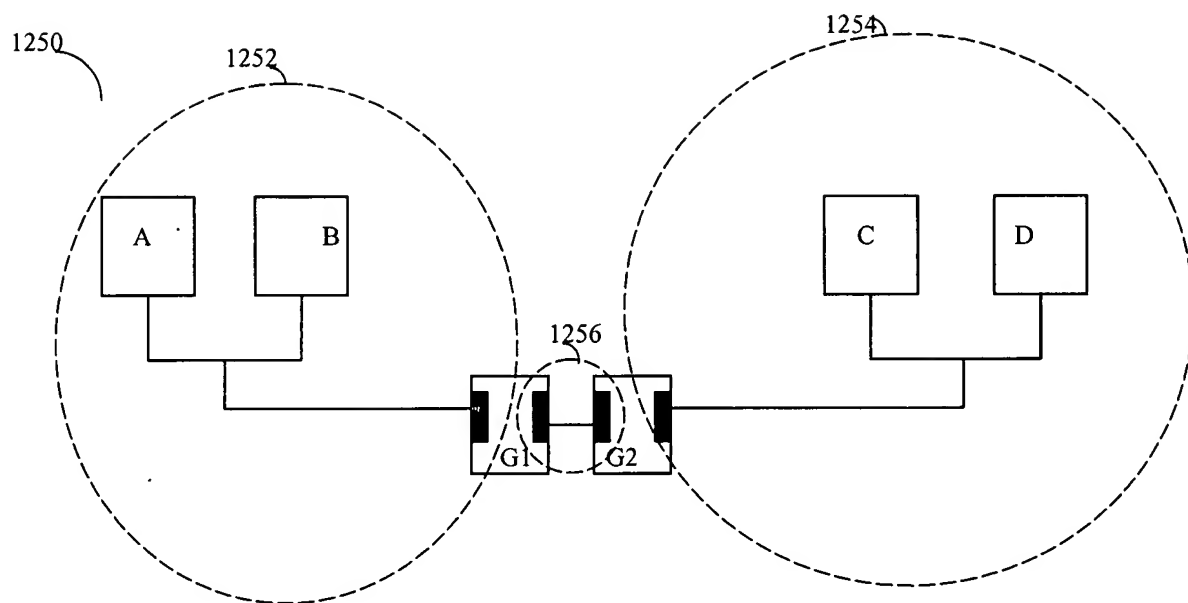


FIGURE 21B

Connectivity Search - Main Loop

1300

START

FINISH

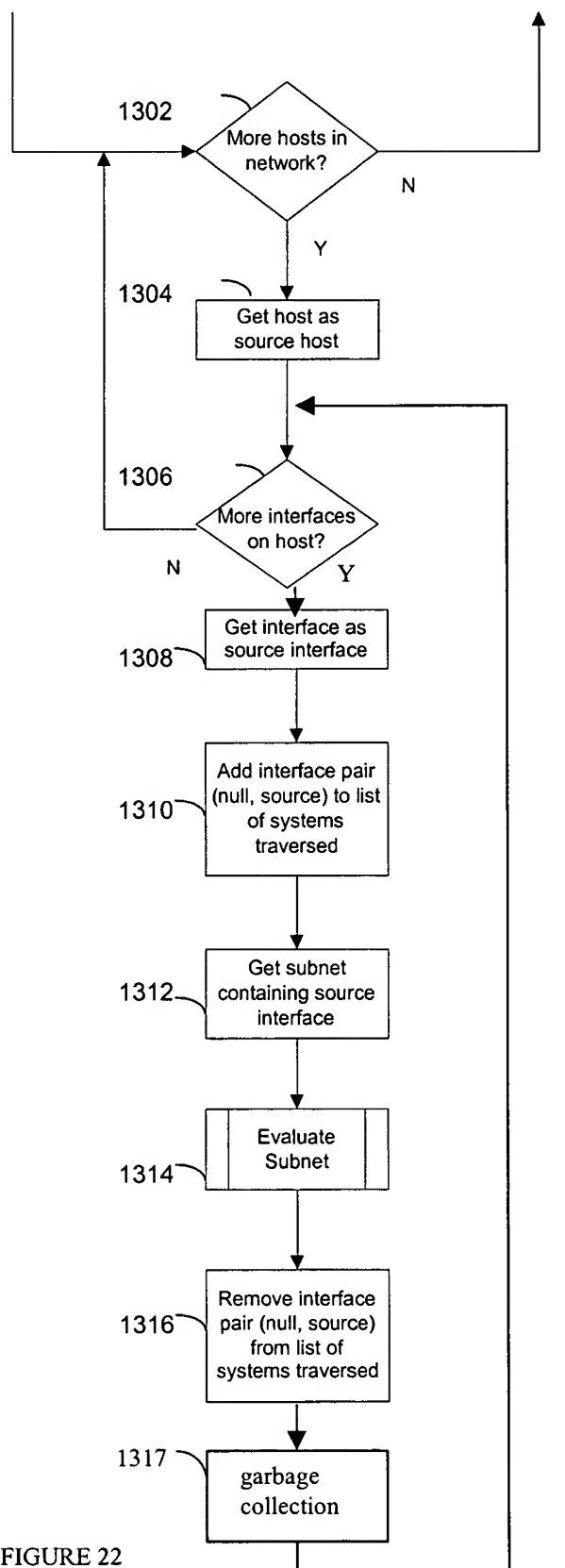


FIGURE 22

1314

Process: Evaluate Subnet

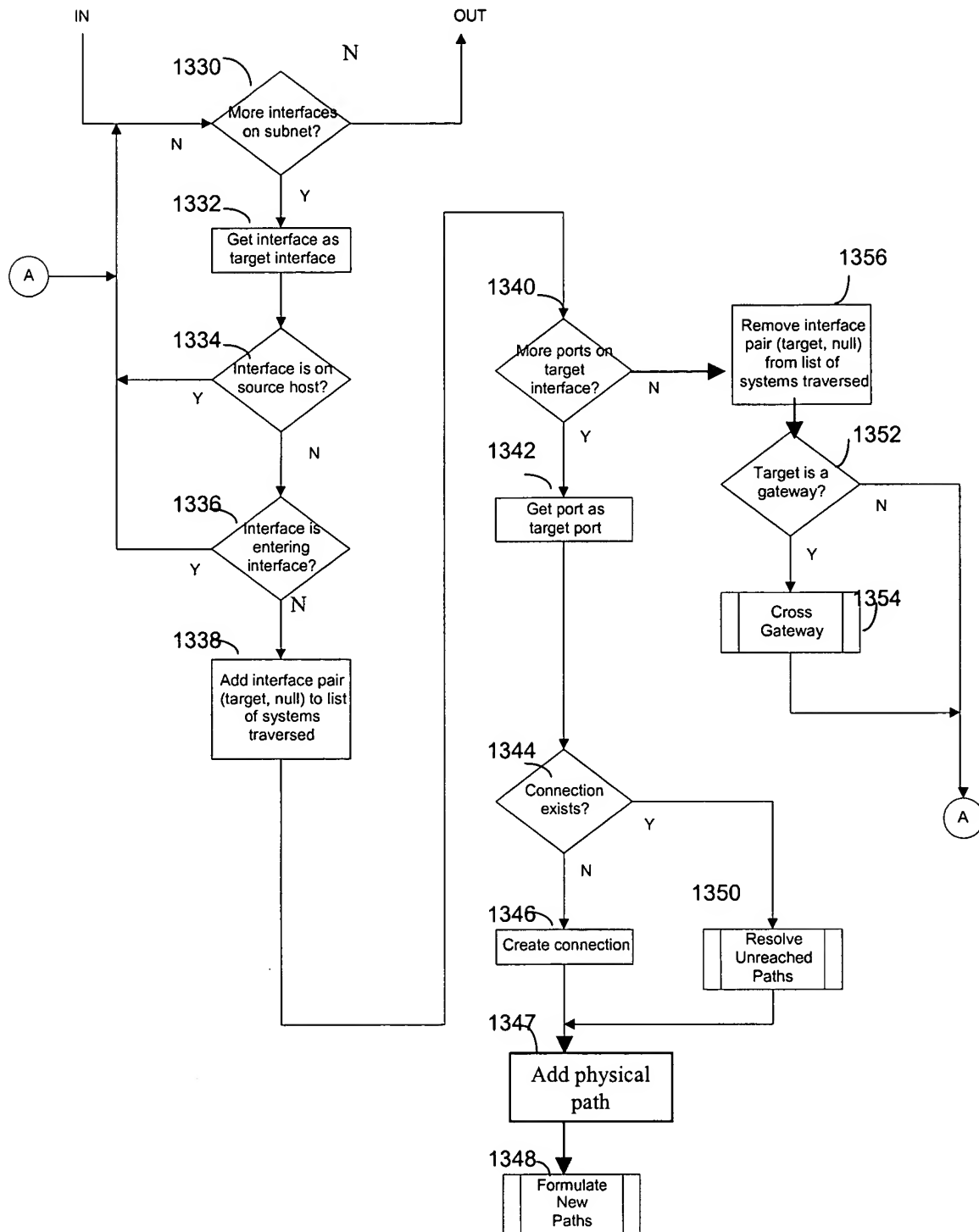


FIGURE 23

Process: Cross Gateway

1354

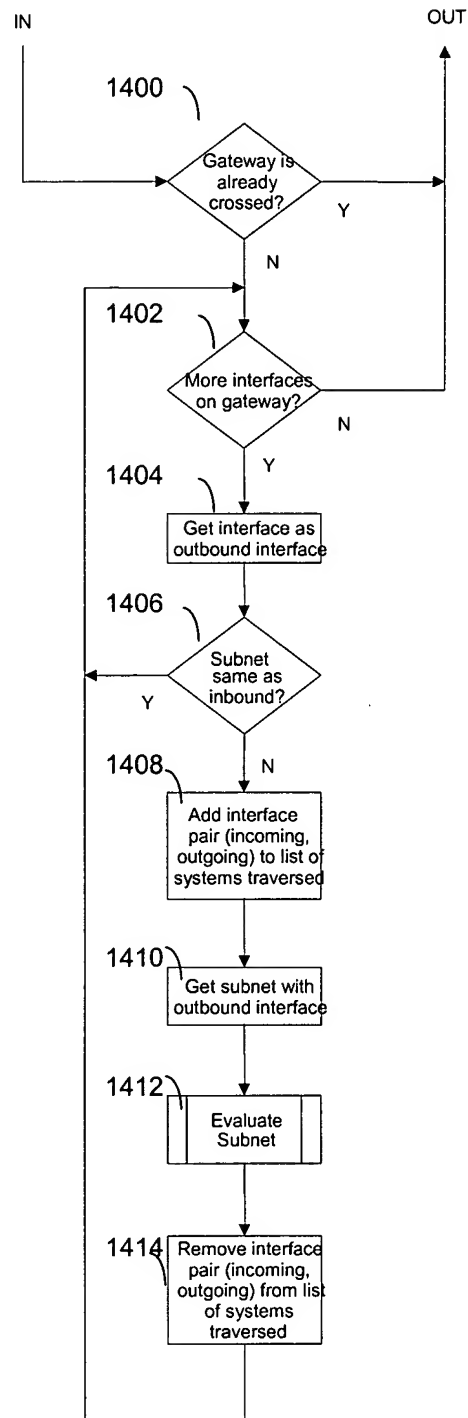


FIGURE 24

Process: Resolve Unreached Paths

1350

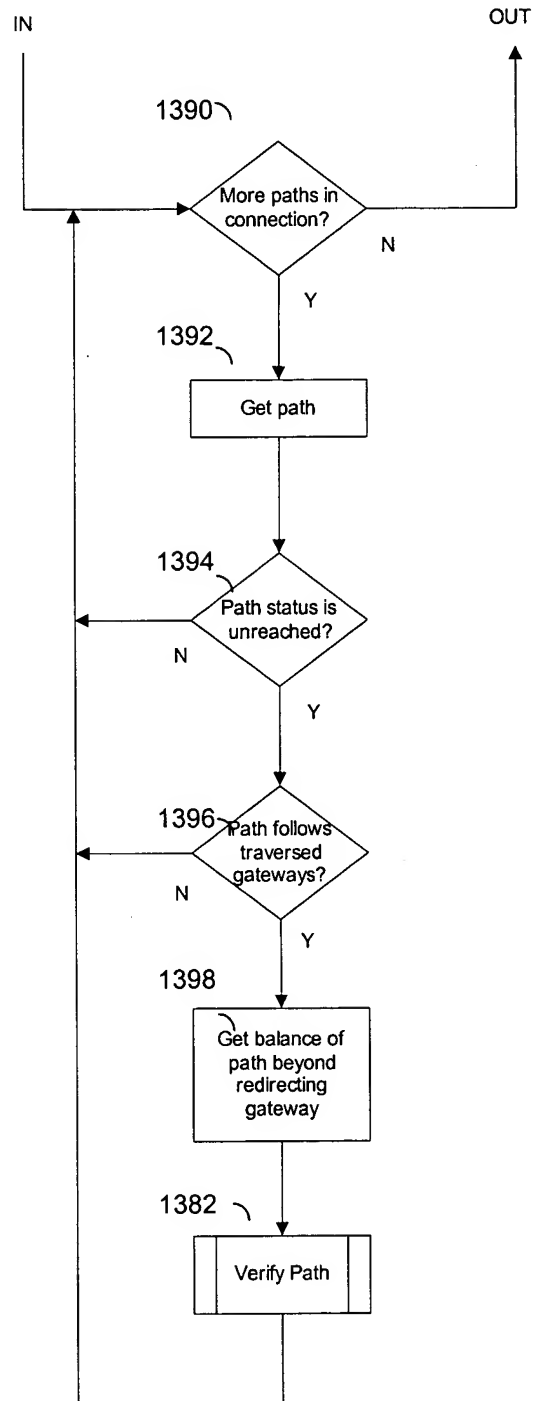


FIGURE 25

Process: Formulate New Paths

1348

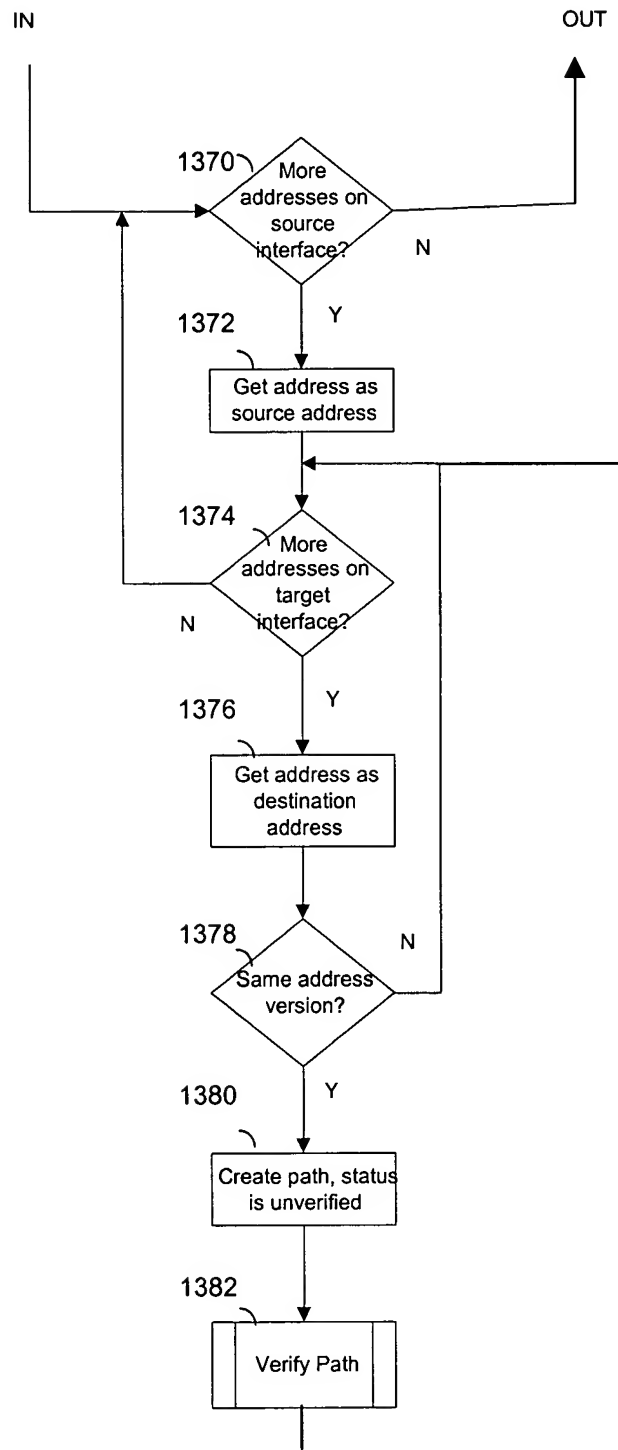


FIGURE 26

Process: Verify Path

1382

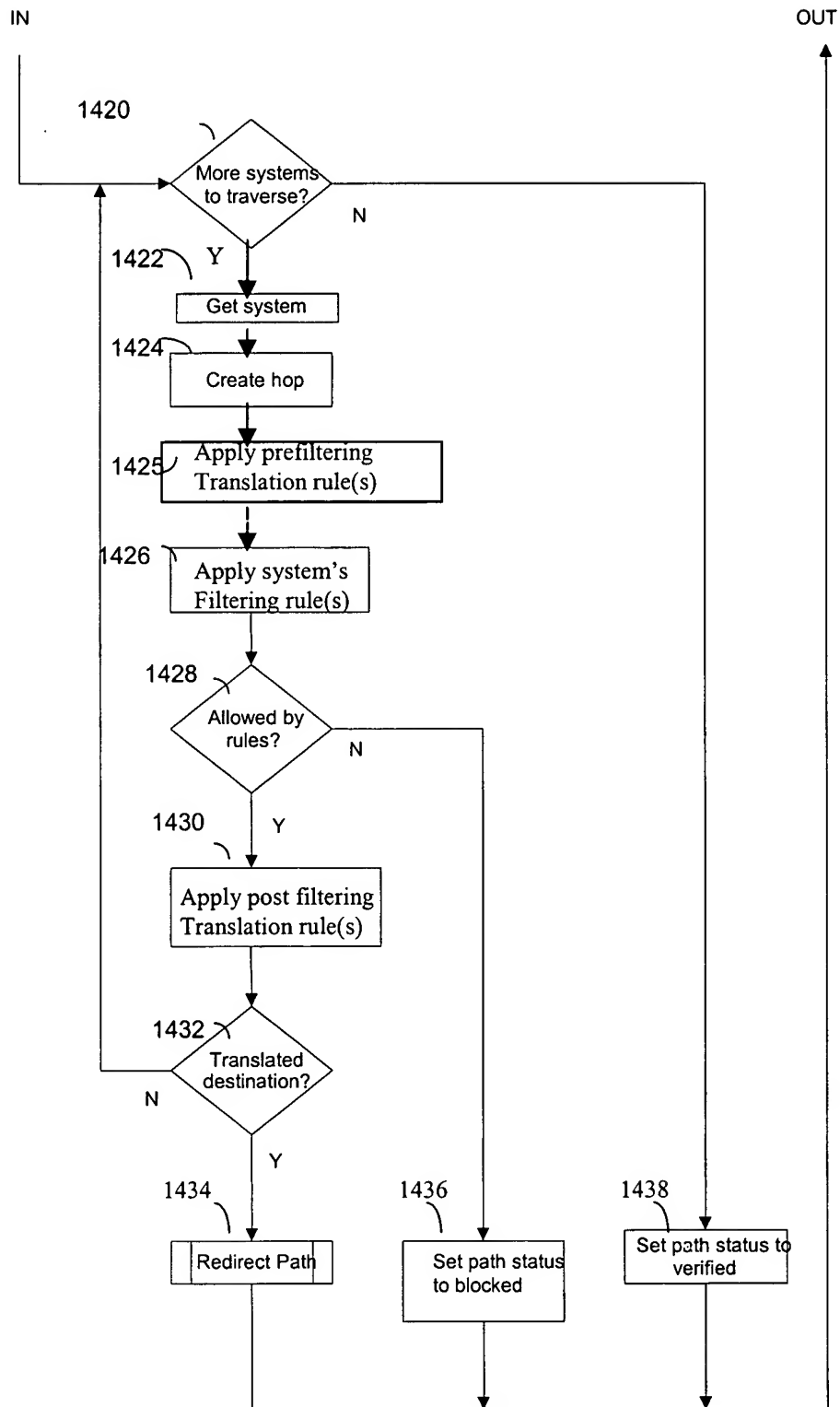


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Process: Redirect Path

1434

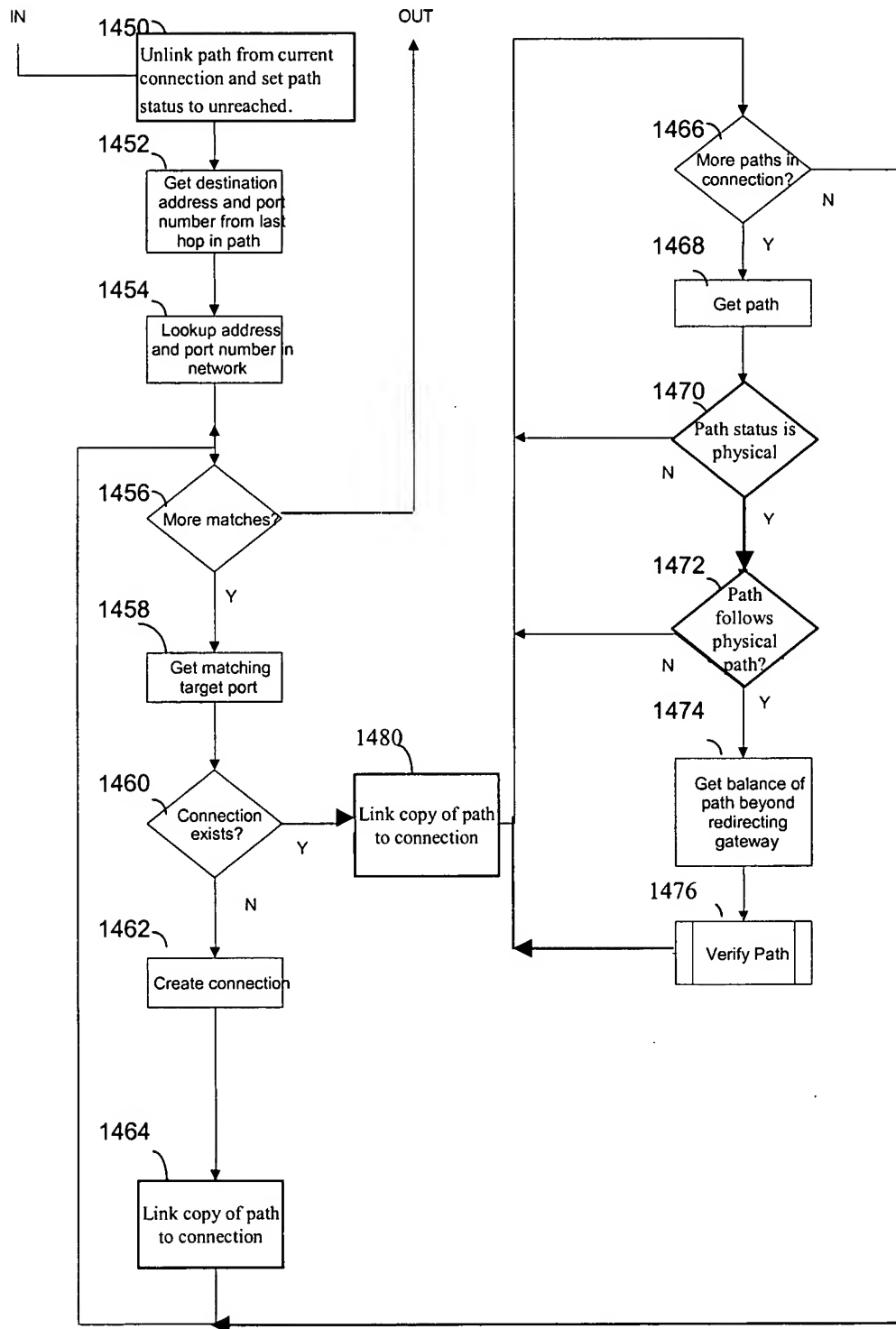
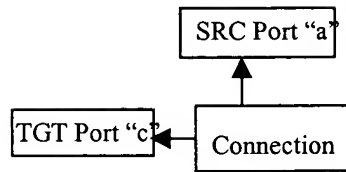


FIGURE 28

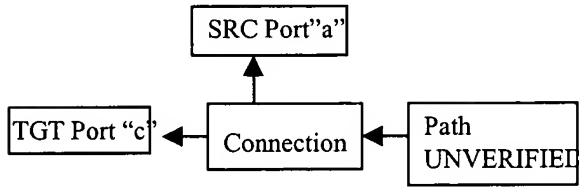
2000

List of systems traversed: A - G1 - G2 - C



2002

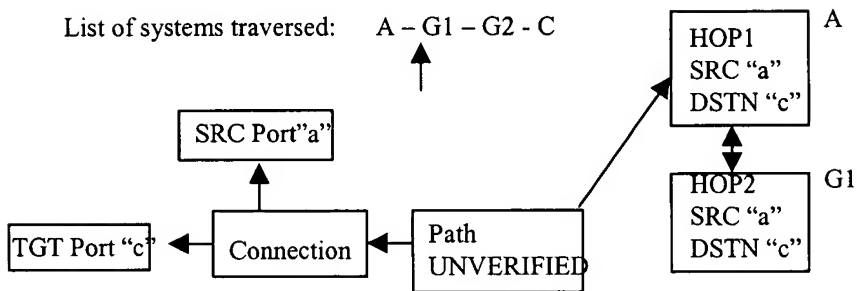
List of systems traversed: A - G1 - G2 - C



After step 1380

2004

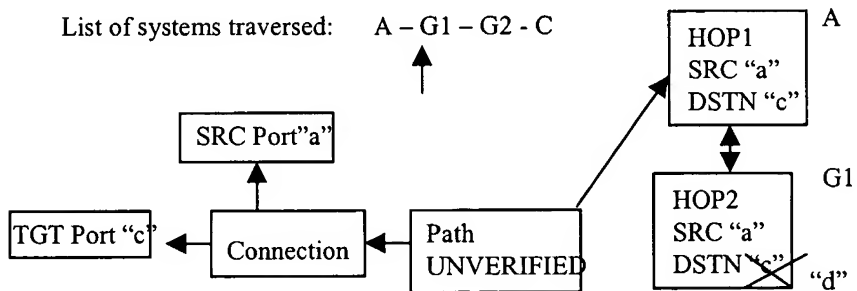
List of systems traversed: A - G1 - G2 - C



Before step 1430

2006

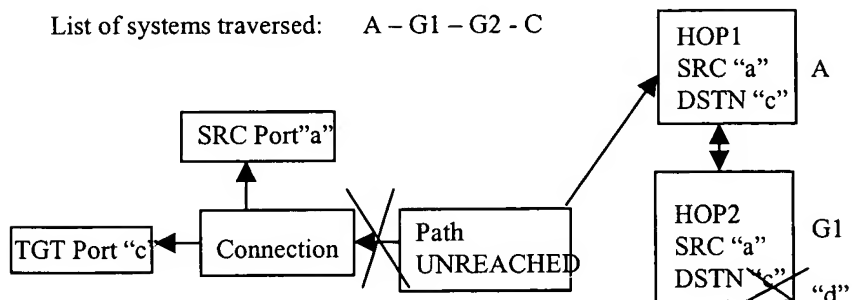
List of systems traversed: A - G1 - G2 - C



After step 1430

2008

List of systems traversed: A - G1 - G2 - C

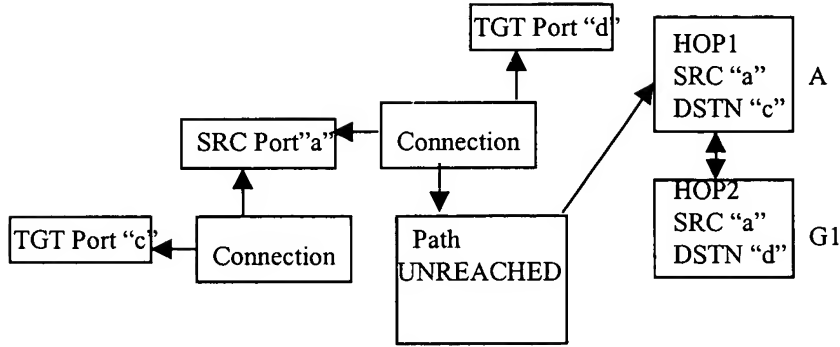


After step 1450

2010

FIGURE 29A

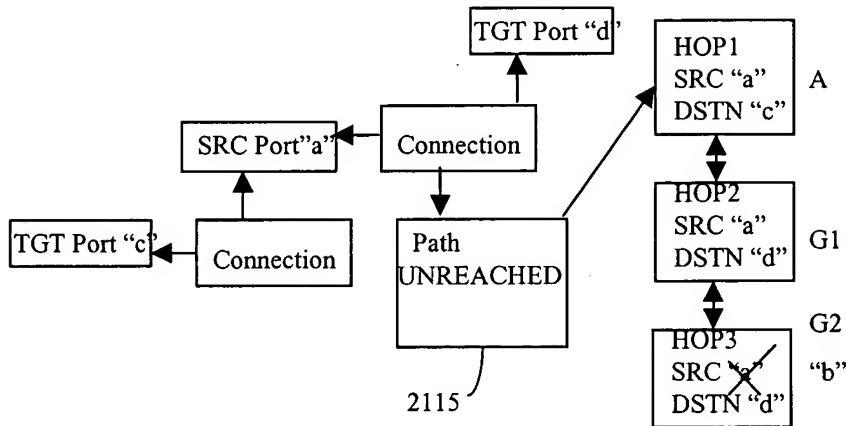
List of systems traversed: A - G1 - G2 - C



After step
1464

2112

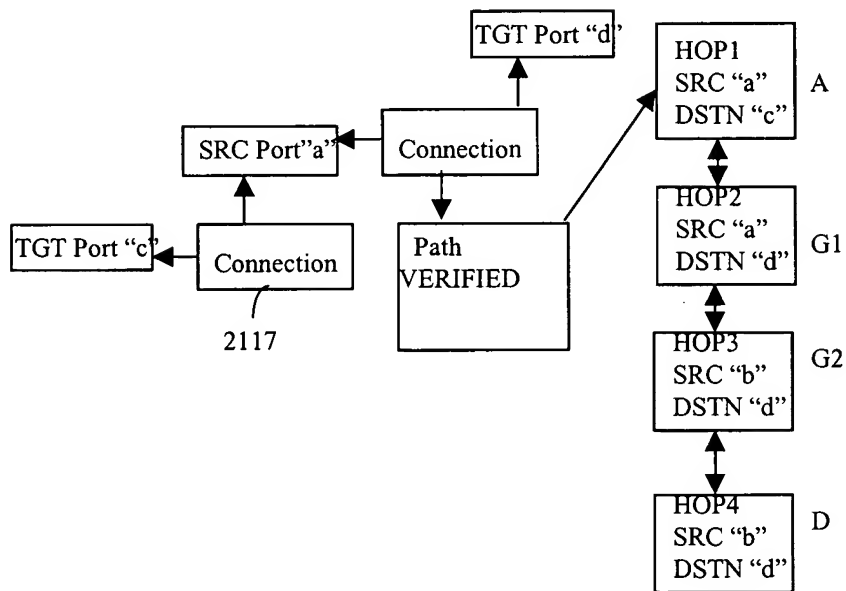
List of systems traversed: A - G1 - G2 - D



After step
1430

2114

List of systems traversed: A - G1 - G2 - D



After Verify
Path completes

2116

FIGURE 29B

End-to-End Connectivity Map - Logical Structures

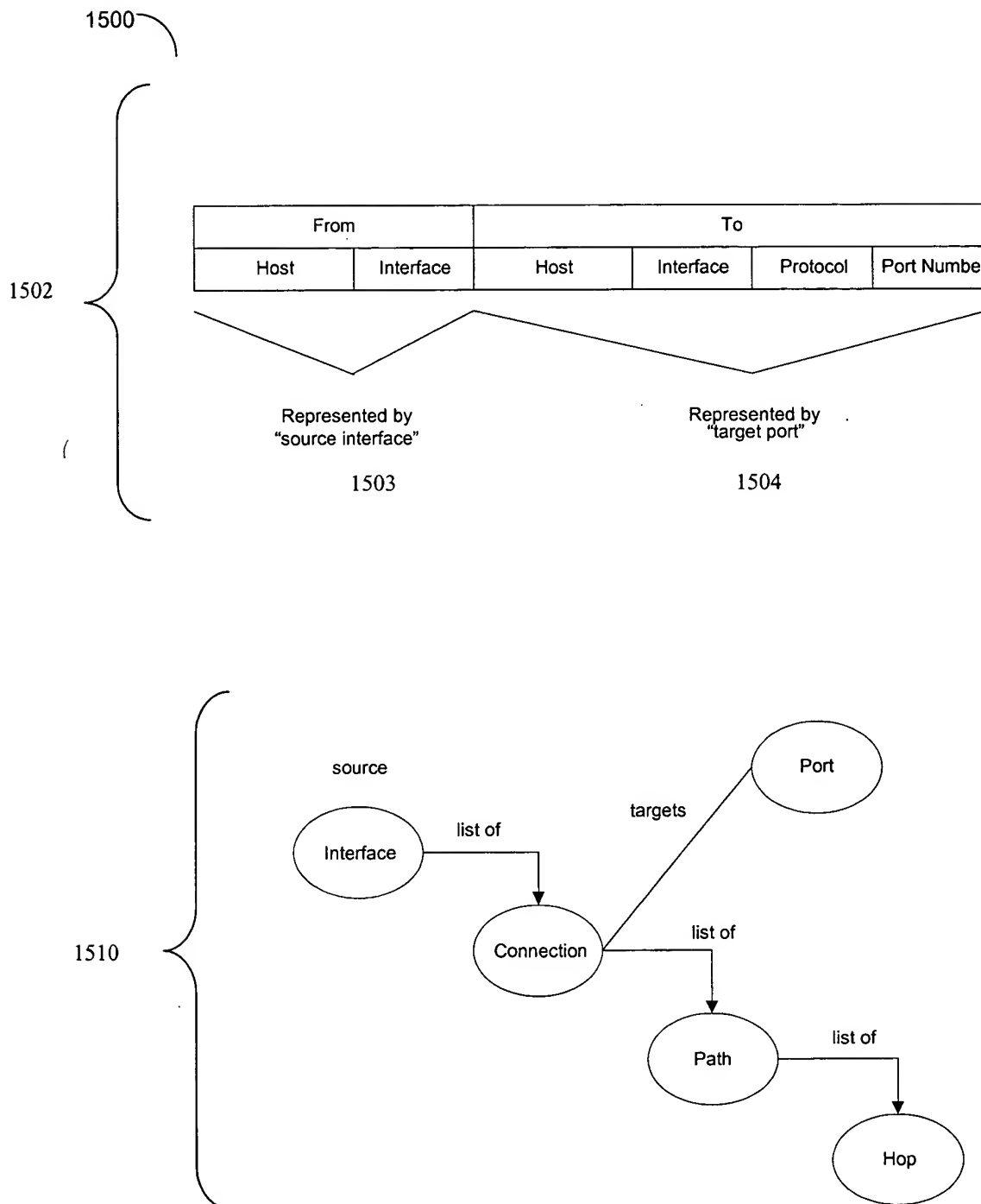


FIGURE 29C

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2220

2222 Firewall rule no.	2224 Src	2226 Destination	2228 Service		2230 Action	2232 Times in Effect
			protocol	port #		
	:			:		:

FIGURE 29D

3000

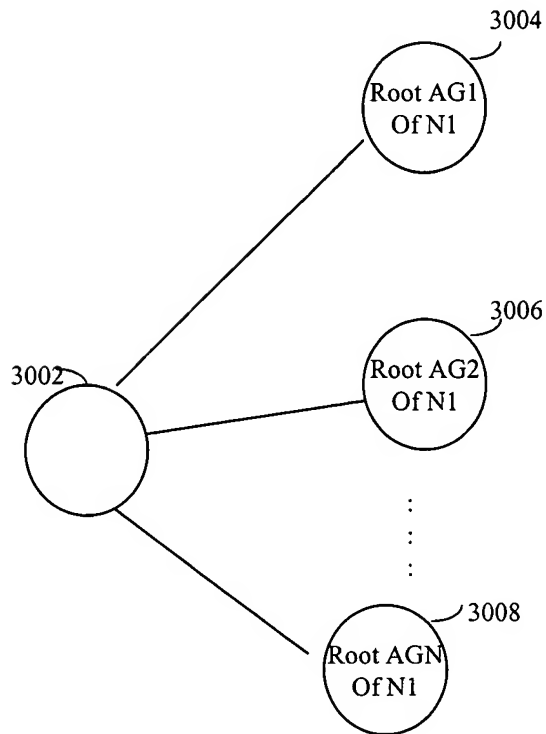


FIGURE 30